

# Natural Heritage & Endangered Species Program

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## THREATENED SPECIES OF MASSACHUSETTS

### Melsheimer's Sack-Bearer (*Cicinnus melsheimeri*)

**DESCRIPTION:** Melsheimer's Sack-Bearer is a medium-sized, hairy moth with a wingspan ranging from 3.5 - 5 cm (1-2 in). Its wings are gray to grayish brown with orangish brown shading and black dusting near the margins of the wings. A solid dark line crosses all the wings abruptly turning inward on the forewings. Melsheimer's Sack-Bearer is the only North American species of the genus *Cicinnus*, and one of the few North American representatives of its family, *Mimallonidae*.

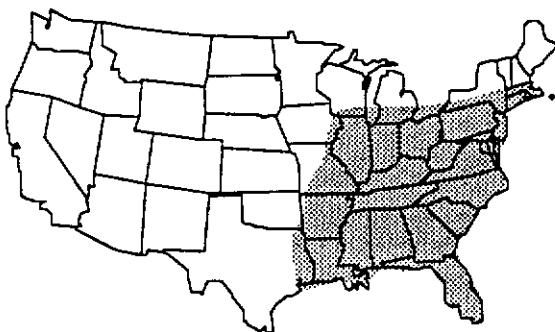


**RANGE:** Melsheimer's Sack-Bearer occurs widely throughout the southern United States and northward in very scattered, dry habitats into Massachusetts, Pennsylvania, southern Ontario, and Minnesota. The overall range of this species extends from Massachusetts (including the island of Martha's Vineyard) and southern Ontario south to Florida and west to Wisconsin and Texas.

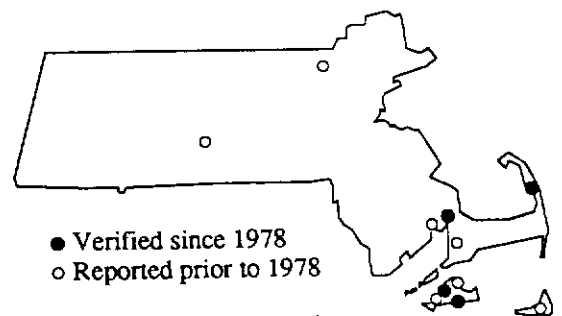
Covell, Charles V., Jr. *A Field Guide to the Moths of Eastern North America*. Boston: Houghton Mifflin Co., 1984.

**HABITAT IN MASSACHUSETTS:** Melsheimer's Sack-Bear occurs in pitch pine/scrub oak barrens. These barrens are an open shrubland plant community, that occurs on outwash sandplains. Characteristic of these barrens is an open canopy of pitch pine, a nearly impenetrable understory of scrub oaks up to 2-3 m (7-10 ft), and shorter huckleberry about a meter (3 ft) tall.

Pitch pine/scrub oak barrens are not floristically very diverse; the combination of species plus the physical structure of the vegetation define the natural community. The main tree species is pitch pine (*Pinus rigida*) with the shrubs scrub oak (*Quercus ilicifolia*) dominant near the coast and dwarf chinquapin oak (*Q. prinoides*) more common inland. Huckleberry (*Gaylussacia baccata*) is shorter than the oaks and often grows in dense clones. Lowbush blueberries (*Vaccinium angustifolium* and *V. pallidum*) may form large patches, or grow mixed with other



Documented Range of  
Melsheimer's Sack-Bearer



Distribution in Massachusetts

species. In the openings between the shrubs, there are usually clones of bearberry (*Arctostaphylos uva-ursi*), large patches of fruticose (shrublike) lichens and intermixed areas with sedges (primarily *Carex pensylvanica* and *C. rugosperma*) or little blue stem (*Schizachyrium scoparium*).

**LIFECYCLE/BEHAVIOR:** The young larvae of *Cicinnus melsheimeri*, immediately after hatching, draws together two small leaves with strands of silk, and makes its hiding-place between them. When more mature, it detaches two pieces of leaves and makes them into an open-ended case or "sack" which it carries about and can desert at will. When at rest it ties the "sack" to a selected station with a few strands of silk, which it bites off when it desires to restart its journey among the branches feeding on its larval foodplant, scrub oak (*Quercus ilicifolia*). The larvae overwinter in these "sacks," and pupate late in the spring. Adults may be found in Massachusetts in late June.

**POPULATION STATUS IN MASSACHUSETTS:** Melsheimer's Sack-Bearer is listed as a "Threatened Species" in Massachusetts because of its population decline, decrease in distribution, and current rarity in the state. Historically or prior to 1978, there were 7 sightings or "populations" reported in 7 different locations. Since 1978, there have been 4 populations in 4 locations reported and verified to the Massachusetts Natural Heritage and Endangered Species Program. Threats to this species' pitch pine/scrub oak barrens habitat include development and alteration which changes and fragments its habitat, and fire suppression which causes the area to succeed filling in the open areas this moth prefers.

**MANAGEMENT RECOMMENDATIONS:** The habitat of the pitch pine/scrub oak barrens needs to be open and should be maintained by controlled, infrequent (every 50 years), patchy fires allowing for current populations to recolonize. Present populations should be monitored and searches made for new populations. This species should be looked for elsewhere. Since it flies very late at night, it may often get overlooked.

Gypsy moth spraying, or other widespread spraying with insecticides in spring or summer will adversely affect or eradicate this species. No insecticides should be used during the active stages of its life cycle (between April 15 and September).

#### **References Cited:**

- Covell, Charles V., Jr. A Field Guide to the Moths of Eastern North America. Boston: Houghton Mifflin Company, 1984.
- Goldstein, P.Z. "Updated of rare insect occurrences in the Manuel F. Correllus State Forest and vicinity, Martha's Vineyard, Dukes County, Massachusetts," Report to Massachusetts Natural Heritage and Endangered Species Program, 1994.
- Holland, W.J. The Moth Book - A Guide to the Moths of North America. New York: Dover Publications, Inc., 1968.
- Schweitzer, Dale. "Cicinnus melsheimeri." Element abstract. Massachusetts Natural Heritage and Endangered Species Program, 1982.